

THE SONORAN DESERT NETWORK – A BRIEF OVERVIEW

Background: The Sonoran Desert Network (SODN) Inventory and Monitoring Program is comprised of 11 parks in southern Arizona and New Mexico. SODN Park units range in size from 17 to 130,000 ha and encompass elements of both the Sonoran Desert and Apache Highlands ecoregions. With the exception of Organ Pipe Cactus NM (ORPI) and Saguaro NP (SAGU), SODN park units are relatively small in size and staff; more than half of SODN parks have no permanent resource management staff. Even the larger SODN parks are dwarfed by adjacent lands managed by other entities, highlighting the need for cooperative approaches to monitoring and effective resource management.

As one of the first 12 Vital Signs Networks funded through the Natural Resource Challenge, the SODN has employed a three-part process to identify specific management goals and concerns for SODN parks, develop an overall monitoring framework, and select and prioritize candidate vital signs. Through partnerships with other organizations, the SODN has brought together diverse experts to create a science-based, peer-reviewed framework for ecosystem monitoring in SODN parks within the context of the overall Sonoran Desert. This framework provides the structure for following steps of developing specific parameters and protocols, linking monitoring to adaptive management, data management, and reporting on the condition of SODN parks.

Biological Inventories: Biological inventories of vertebrates and vascular plants in SODN parks commenced in 2000 through a cooperative agreement with the University of Arizona. As reliable baseline ecological data were lacking for most SODN parks, extensive field surveys and data mining efforts were conducted at 9 of the 11 SODN parks; the wealth of existing scientific research at Montezuma Castle and Organ Pipe Cactus NMs precluded the need for additional field surveys at these units.

Status: Final, park specific biological inventory reports and associated data products for the parks in which field surveys were conducted (all but MOCA and ORPI) were completed in FY2005. Completion of analogous reports based on legacy data will occur by the end of CY2005. NP Species certification for all 11 parks will be completed by the end of CY2005, with the assistance of Arizona-Sonora Desert Museum taxa experts. Publication of inventory findings on a park by park basis was initiated in 2005 with USGS partners through the Desert Southwest Cooperative Ecosystem Study Unit (CESU).

Funding: SODN biological inventories are not slated for additional. Completion of the remaining resource inventories will be addressed as funds become available from WASO.

Vital Signs Monitoring: Development of the Phase III and final SODN Monitoring Plan occurred during FY2005. Protocol development and implementation for the 25 high-priority SODN vital signs commenced in FY2005. The SODN approach to monitoring engages agency, research, and NGO partners in the ecoregion in cooperative approaches to protocol development and operational monitoring through the Sonoran Desert Regional Monitoring Partnership and the Sonoran Institute Adaptive Management Program.

Status: The final SODN Monitoring Plan and Data Management Plan have been accepted by WASO, IMRO, and the SODN Board of Directors. This completes the SODN is currently engaged in protocol development and implementation of the monitoring plan. FY2006 will be the first year of operational monitoring for SODN.

Funding: SODN Vital Signs Monitoring efforts are scheduled to receive \$670,000 in FY2006.

Water Quality Monitoring: Development of the SODN water quality monitoring program has been integrated into the overall SODN Monitoring Plan development. Water quality and quantity

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issues ranked highly during the SODN vital signs selection process (Phase II). As such, it is anticipated that vital signs funds will be used to augment water quality funds to support water resource and aquatic monitoring in SODN parks.

Status: The SODN Phase III and final Monitoring Plan were accepted by the Water Resources Division in FY2005. Protocol development for water resources and aquatic vital signs was a focal point in FY2005, with intensive pilot studies in three SODN parks. The SODN approach builds from protocols and sampling designs developed by the EPA Ecological Monitoring and Assessment Program (EMAP) and the Arizona Department of Environmental Quality (ADEQ).

Funding: SODN Water Quality funds are anticipated to be \$64,000 in FY2006.

Parks in the Sonoran Desert Network:

<i>Number</i>	<i>Park</i>	<i>Alphacode</i>
1	Casa Grande Ruins National Monument	CAGR
2	Chiricahua National Monument	CHIR
3	Coronado National Memorial	CORO
4	Fort Bowie National Historic Site	FOBO
5	Gila Cliff Dwellings National Monument	GICL
6	Montezuma Castle National Monument	MOCA
7	Organ Pipe Cactus National Monument	ORPI
8	Saguaro National Park	SAGU
9	Tonto National Monument	TONT
10	Tumacacori National Historical Park	TUMA
11	Tuzigoot National Monument	TUZI

Sonoran Desert Network Board of Directors:

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Carol West	<i>Member, Superintendent (Acting), Casa Grande Ruins NM</i>
Alan Whalon	<i>Member, Superintendent, Chiricahua NM and Fort Bowie NHS</i>

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